section; it could arrange, as suggested above, for a program on general biological topics; it could, in its general meetings, take such action as it might see fit to advance any particular biological interest of common import.

It is not too late for the executive committees of the different technical societies to direct their secretaries to cooperate with the secretary of the Naturalists in arranging a general program for the Baltimore meeting.

CHAS. B. DAVENPORT

THE HIGHEST BALLOON ASCENT

TO THE EDITOR OF SCIENCE: I notice that Dr. Chanute in his review of "Airships, Past and Present," SCIENCE, July 3, 1908, says, "The greatest authentic height [in a balloon] attained by man has been 35,500 feet." In Hill's Chemistry for students of Medicine, Pharmacy and Dentistry (1903) the following occurs: "A balloon may rise to a great height, because of its great volume of gas ligter than air. The highest ascent was that of Glaisher in 1861, who attained an elevation of over 36,000 feet." This is found in the chapter on medical physics, page 18.

G. T. OVERSTREET

LOUISVILLE, KY.

[M. Glaisher (September 5, 1862) became unconscious at a height of about 29,000 feet, while still rising at the rate of 1,000 feet per minute. He was again able to make observations after thirteen minutes, at a height of about 26,000 feet and found that he was falling 2,000 feet per minute. From these data and from other corroborative circumstances he estimated that, in the interval, he had reached an altitude of 36,000 to 37,000 feet, but this has not been accepted as authentic. M. Berson's performance (July 31, 1901) is better established. Going up with a provision of compressed oxygen he took an observation at 34,500 feet, while still rising, and then became partly unconscious. He probably rose another 1,000 feet and certainly reached an altitude of 35,500 feet, or possibly of 36,000 feet. He had previously judged that human life was impossible at a height of 36,100 feet and that Glaisher could not have reached it, as "no human being has penetrated to such heights either before or since without taking a supply of oxygen."—ED.]

SALARIES AT BRYN MAWR COLLEGE

TO THE EDITOR OF SCIENCE: In SCIENCE for August 14 appears a letter from Professor David Wilbur Horn, of Bryn Mawr College, criticizing certain financial data concerning that college, which had been reprinted in SCIENCE from a recent *Bulletin* of the Carnegie Foundation.

I venture to call attention again to the fact emphasized on the first page of this *Bulletin* that the statistical data published by the foundation were obtained in all cases directly from the authorities of the institutions themselves. In the case of Bryn Mawr, the statistics were furnished by President Thomas and had apparently been prepared with great care, all the items being in her own handwriting.

HENRY S. PRITCHETT

THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING

QUOTATIONS

THE TRIUMPH OF SANITATION AT PANAMA

THE redemption of the Panama Canal Zone from preventable diseases receives official confirmation in the report to President Roosevelt of the special commission appointed last April to investigate the work accomplished. The importance of the hygienic problem involved is emphasized by the commission in reviewing the difficulties under which the French labored in their efforts to construct the canal. The report says:

> The terrible scourge of yellow fever against which the French struggled in vain, the filthy and pest-breeding state of the principal Panama towns, the rough labor camps and other pioneer hardships of the first two eras have been eliminated through the brilliant and persistent activity of the department of sanitation, the department of municipal engineering and the building department. To-day we find yellow fever driven from the isthmus, malaria and pneumonia greatly reduced and a high average of health established. Although the government's immediate object on the isthmus is to dig the canal and to provide living quarters for a temporary enterprise, it has, in fact, created comfortable homes and well-organized social communities for its working force.

Modern civilization furnishes no better example than this of the possible victory over pestilence and disease, when the warfare is carried on in the light of modern scientific knowledge. The building of the Panama Canal and the sanitary record of the Japanese in their war with Russia are the two great object lessons of recent years, demonstrating that men can neither work nor fight to the best advantage unless protected from infectious and preventable diseases. The civilized nation which will hereafter put an army in the field or undertake a great engineering problem without first preparing the way by proper and adequate sanitary engineering and equipment will be regarded by the other nations as quite as foolish as a government which would build a vast fleet of modern warships and then arm them with the muzzle loading ordnance of one hundred years ago. An epidemic of typhoid fever in a military camp should be considered a greater disgrace to an army than a defeat in battle, since defeat may come in spite of the greatest exertions and the highest wisdom, while typhoid and yellow fever would be the result of ignorance or disregard of well-known laws of prevention. All nations will profit by the sanitary lesson of the Panama Canal.—*Journal of the American Medical Association.*

SCIENTIFIC BOOKS

General Chemistry for Colleges. By Alexander Smith. 8vo, pp. 529. New York, The Century Co. 1908.

This book is practically a somewhat abbreviated and simplified edition of the author's "Introduction to General Inorganic Chemistry" which appeared two years ago. The "Introduction" attracted much attention among teachers of chemistry, and received high praise as an excellent and comprehensive presentation of the subject, but it appears that many teachers, while admiring the book as a treatise, considered it too extensive and difficult for beginners, even at the age of college students.

It is evidently on account of these objections to the larger text-book that the shorter work under consideration has been prepared. This is shorter to the extent of more than two hundred pages, and it has been considerably simplified, chiefly by omissions of less fundamental theoretical matter. It is to be observed that the theoretical topics that have been retained have been presented with the same fullness as before, and that the aspect of the new book in its arrangement and illustrations is very similar to that of the old one, although some conspicuous changes have been made in the presentation of some of the theoretical topics, and other minor changes and improvements have been introduced.

It appears to be somewhat doubtful that the present book will appeal to the majority of those who considered the former book too difficult, because the chief changes are those of omission, and they could be made easily while using the larger book.

There is evidently a tendency at the present time to use less childish chemical text-books for older students than was formerly the custom, and this movement is undoubtedly an excellent one, as far as the education of our more capable students is concerned. Therefore, the new book, by a teacher who has shown such ability in text-book production, is to be welcomed, although it may not be considered entirely "easy," and it is to be hoped that we shall soon have a revision of his "Introduction," which, whatever may be thought of it for beginners, is a very useful book for more advanced students.

As a single criticism it may be said that several of the brief statements in regard to metallurgy need revision, even in the later edition. This metallurgical weakness is a very common fault in elementary text-books of chemistry.

H. L. Wells

Thermodynamics of Technical Gas Reactions. Seven Lectures. By Dr. F. Haber, Professor at the Technische Hochschule, Carlsruhe. Translated by Arthur B. Lamb, Ph.D., Director of the Havemeyer Chemical Laboratory, New York University. Pp. 356. London, Longmans, Green and Co. 1908.

Since Gibbs and Helmholtz showed that the